CALIFORNIA
AIR RESOURCES BOARD

Proposed Advanced Clean Cars II Regulations

June 9, 2022

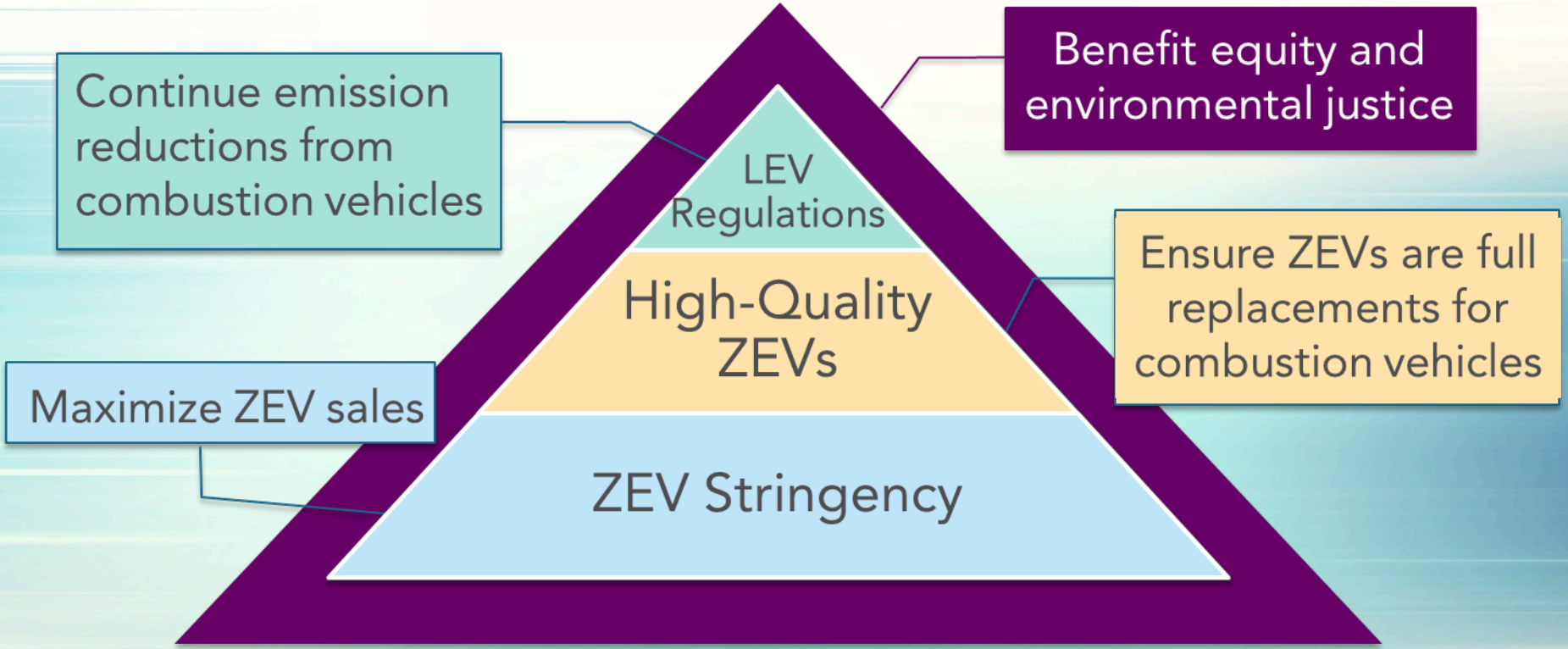
Sacramento, CA

Outline

- Background on Advanced Clean Cars
- Zero-Emission Vehicle (ZEV) Regulation Proposed Amendments
- Low-Emission Vehicle (LEV) Regulation Proposed Amendments
- ACC II Expected Benefits and Impacts
- Summary of Public Comments
- Proposed 15-day Changes
- Next Steps

CARB

Transforming Passenger Vehicles

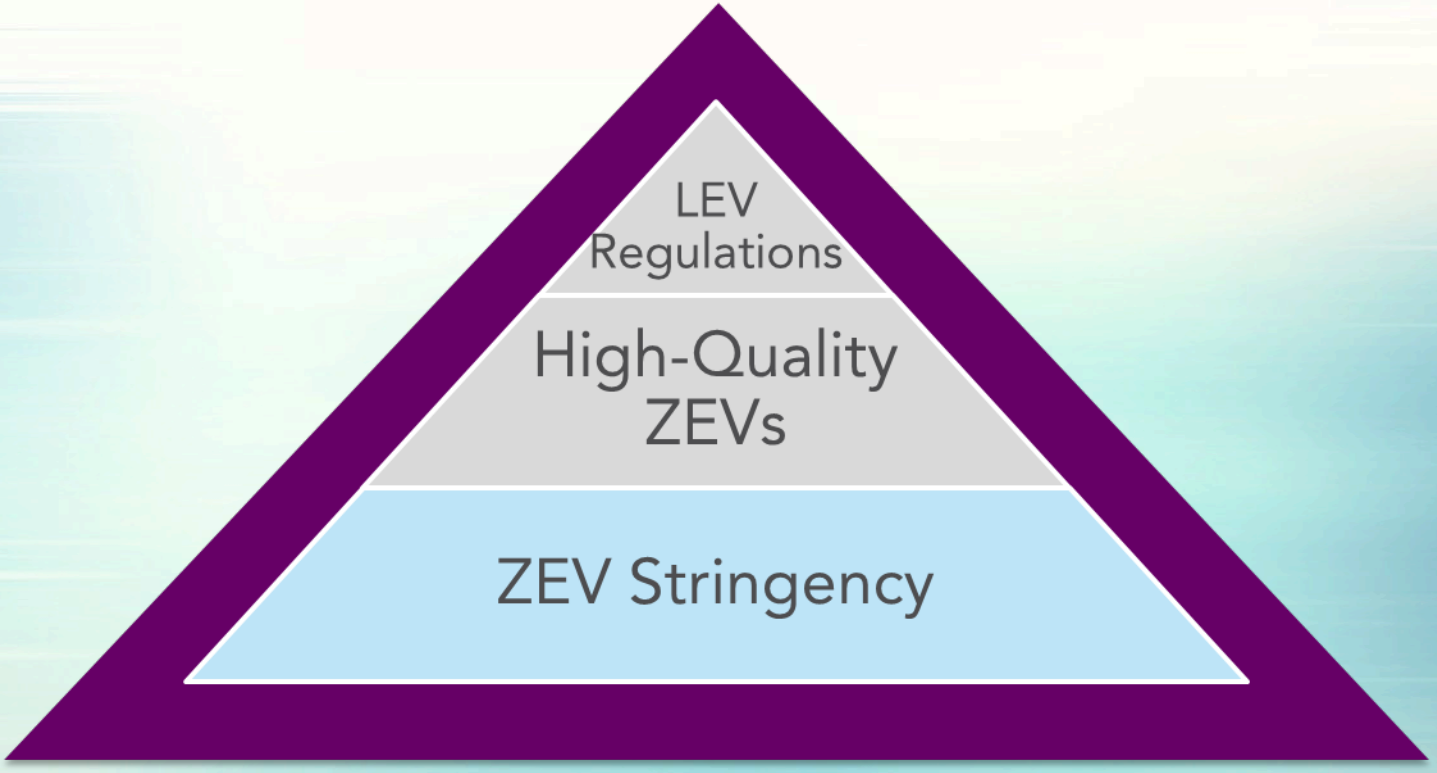


CARB

Development of the Proposal

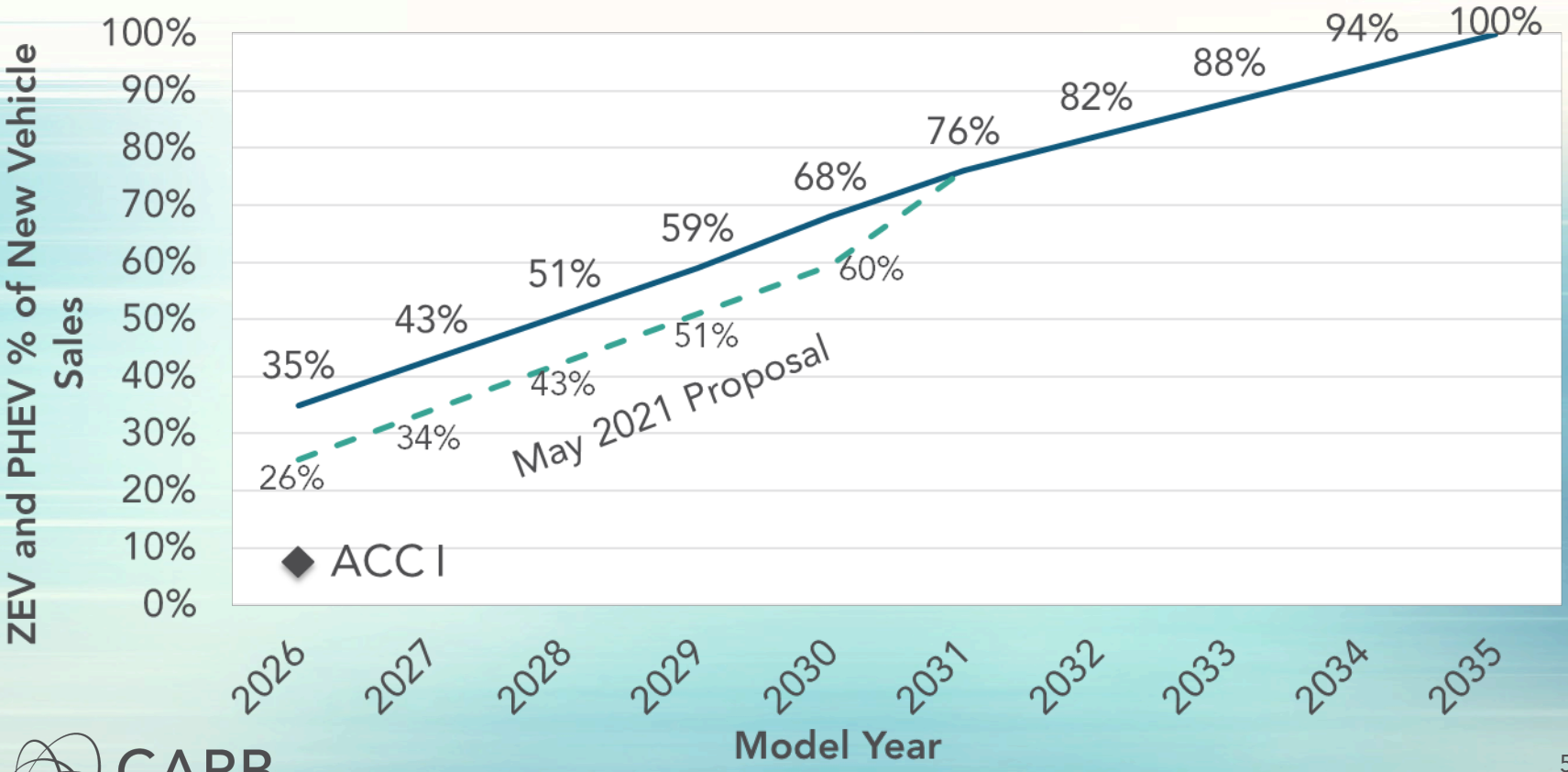
- Four public (virtual) workshops
- One public community listening session
- Stakeholder working groups and individual meetings
  - 40+ meetings with equity advocates and community-based organizations

Maximize ZEV Sales



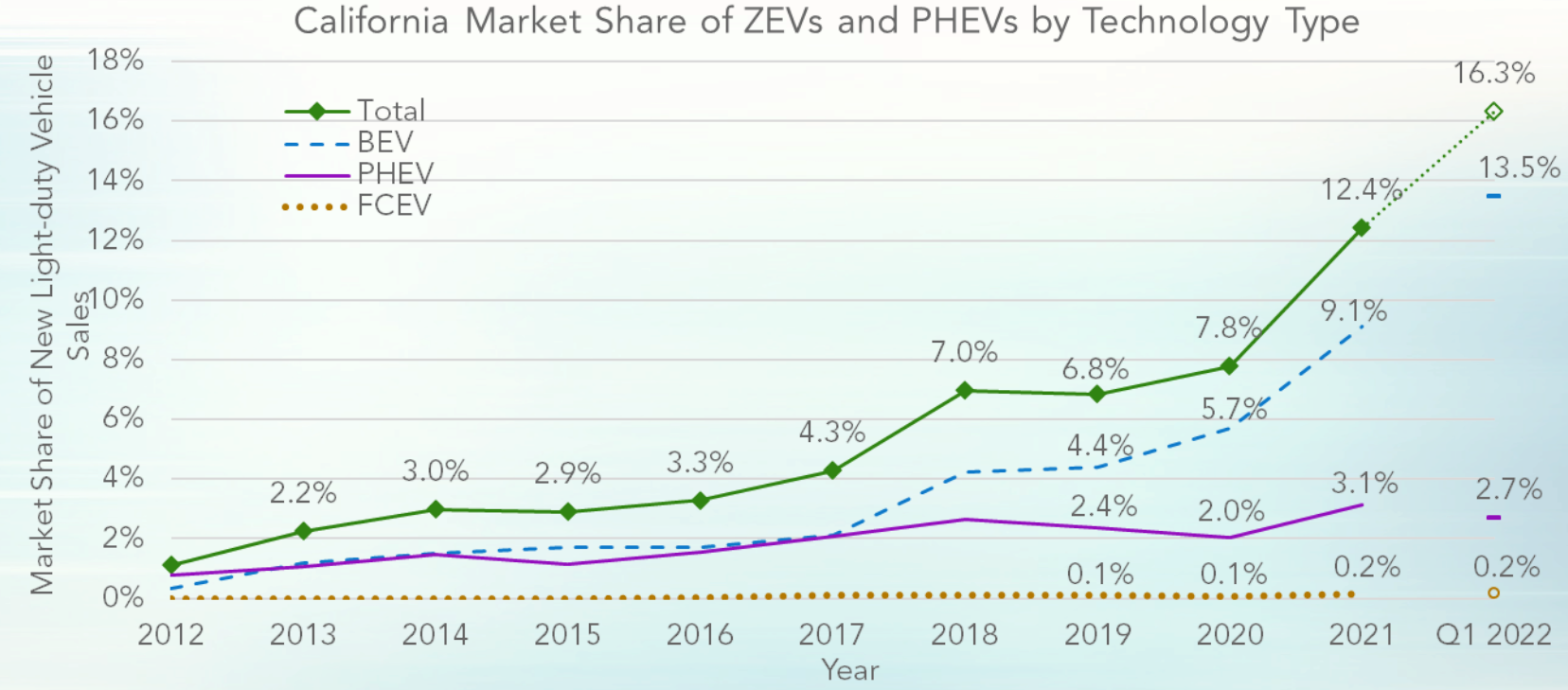
CARB

ACC II: ZEV Requirement Proposal

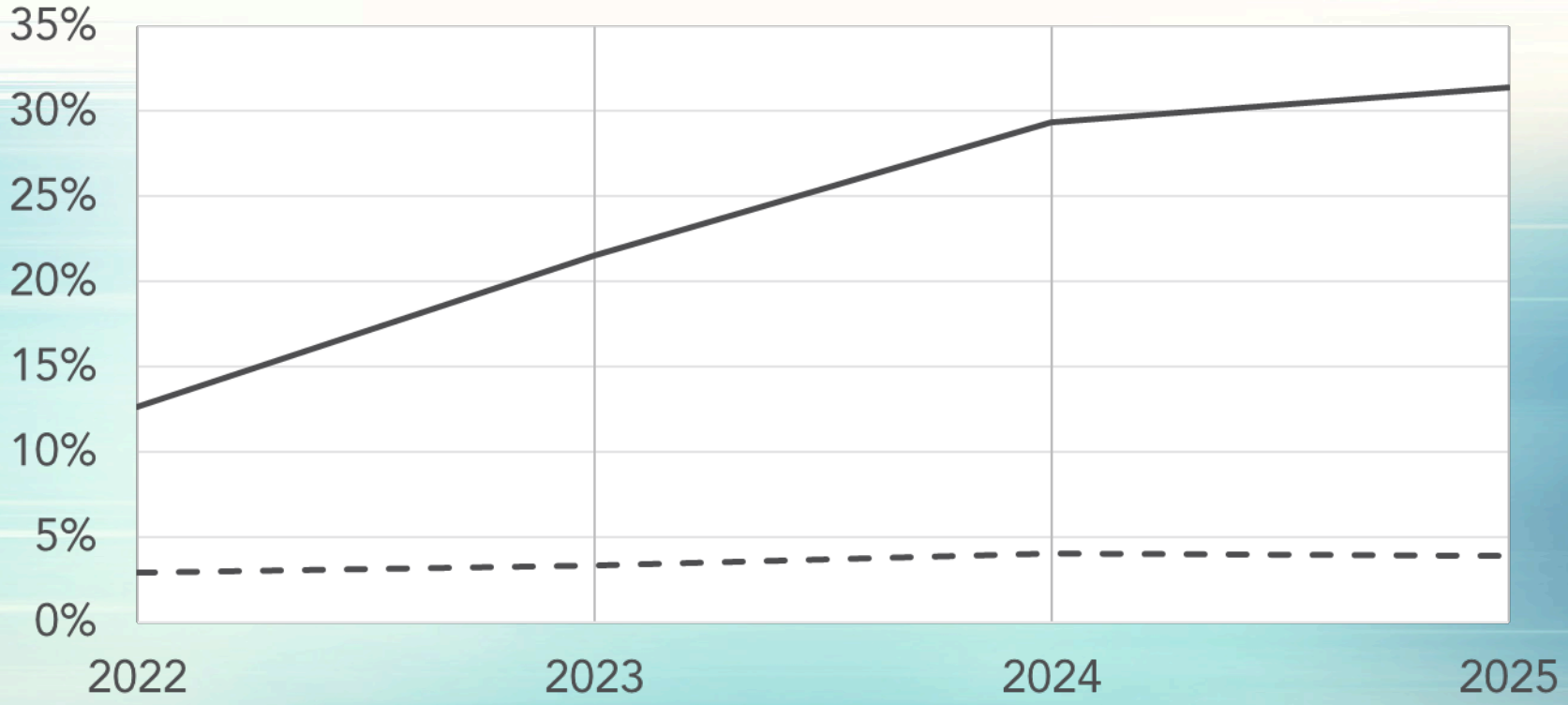


CARB

The transition has already begun: One million+ ZEVs and PHEVs in CA

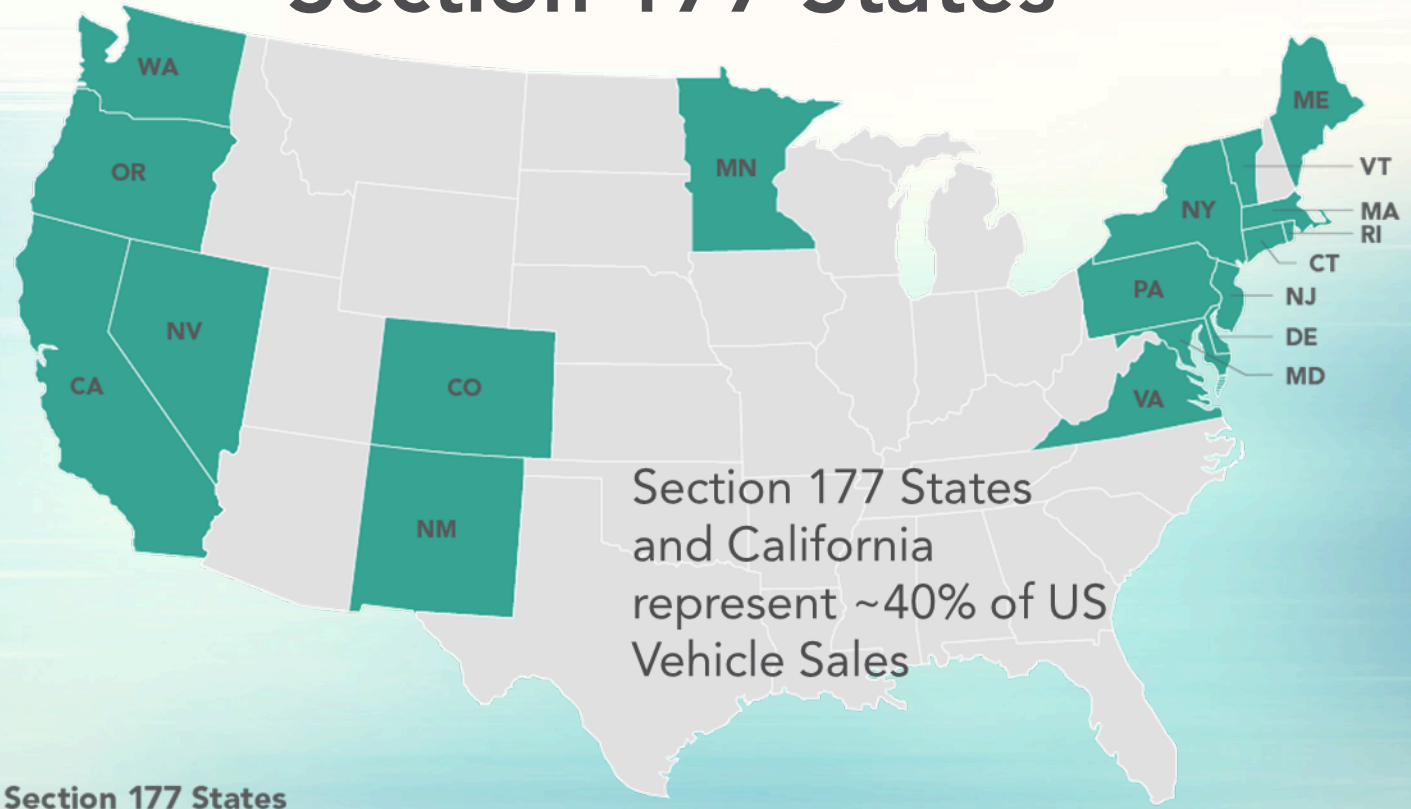


Industry Electrification

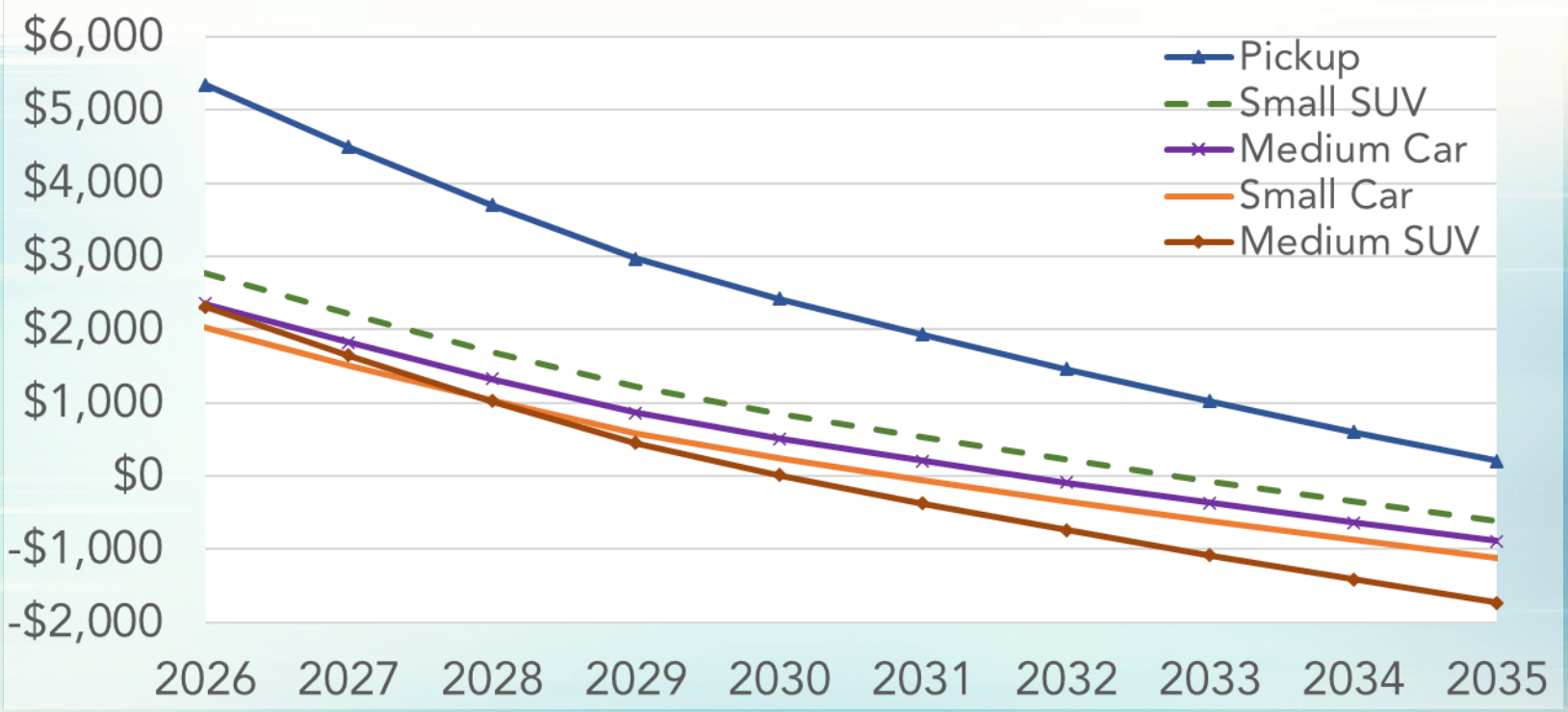


CARB

California is not alone: Section 177 States



Incremental costs for 300-mile BEVs: *Cost parity for most segments by 2033*



CARB

ZEV Regulation designed to achieve 100% ZEVs

- Requirements designed to provide volume certainty
- One-value per vehicle system with minimum technical requirements
- Limits on value banking and spending
- Flexibilities encourage overcompliance, direct action, and to manage year to year fluctuations, market, and supply chain disruptions

Environmental justice values to reward direct automaker action

Discounted EVs in Community Programs

Lower MSRP EVs

More Used EVs to Participating Dealerships

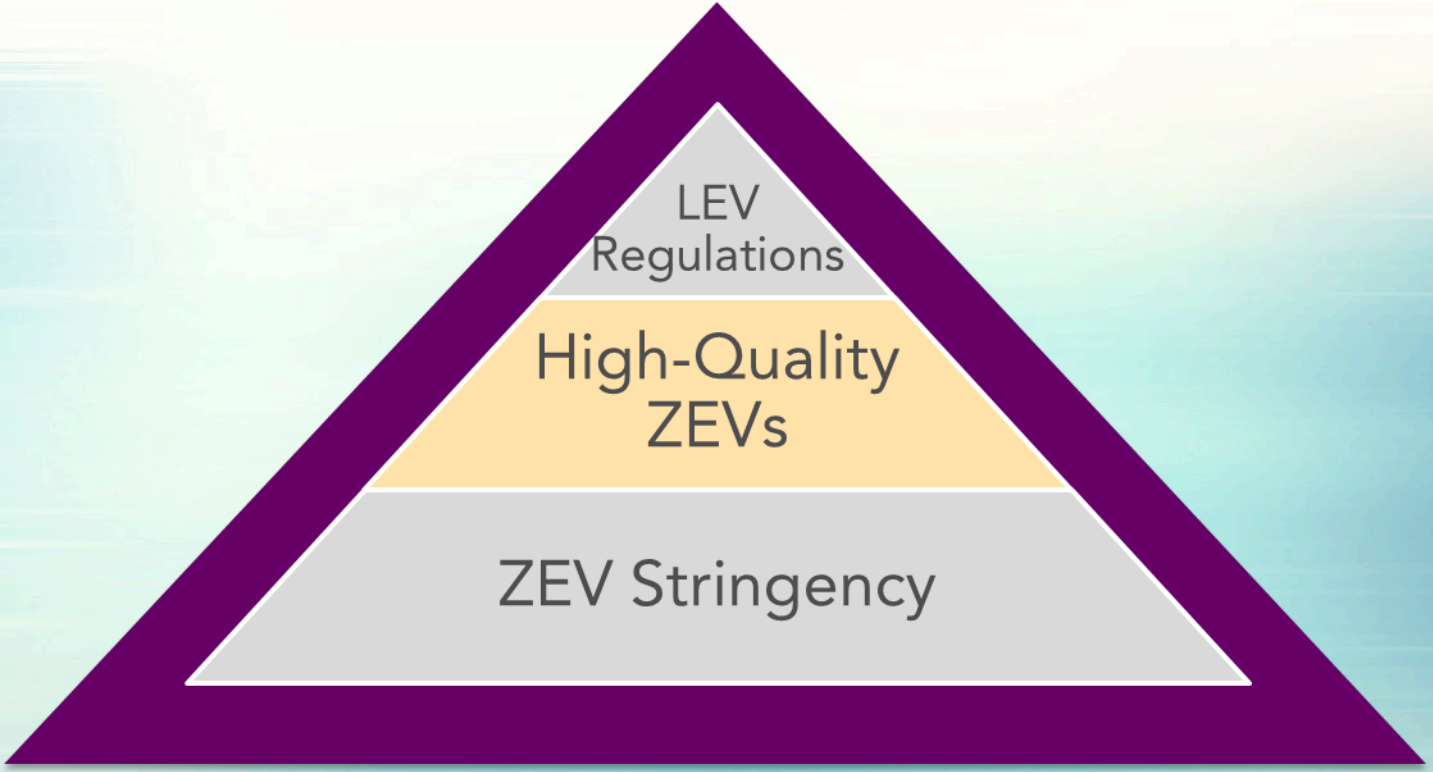
Compliance Mechanisms

Reward Early Action: Values for pre-2026 model year ZEVs and PHEVs

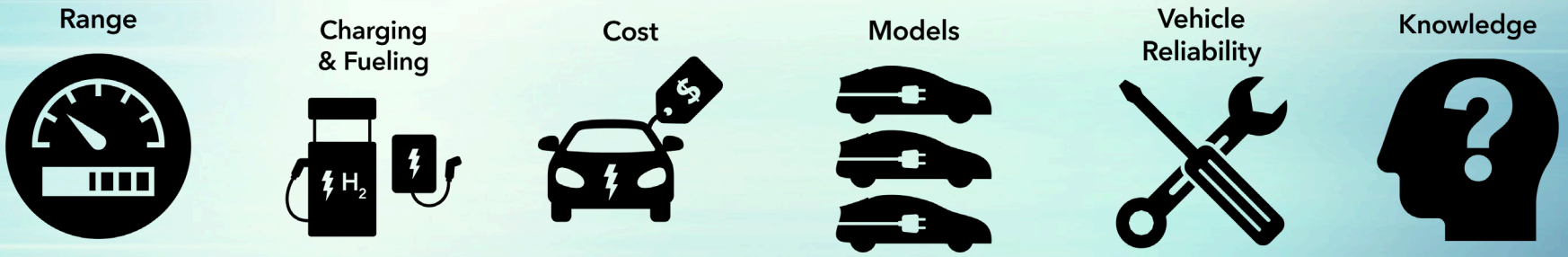
Smooth out State-to-State Fluctuations: OEMs can "pool" across States

Honor ACC I Overcompliance: Use of ACC I historical banked credits

Ensure ZEVs are full replacements for combustion vehicles



Consumer Concerns: Barriers to adoption still exist



Longer Range and More Durable ZEVs

Range

Minimum of 150-mile range

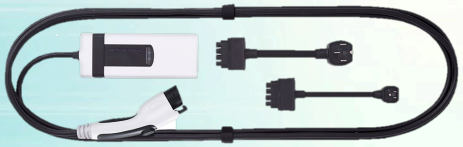
Added durability: maintain 75-80% of range for life of vehicle

Meaningful and transparent warranties

CARB

Improving the charging experience

Charging & Fueling

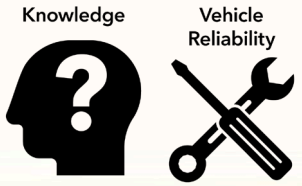


More capable charging cords

Streamlined fast charging

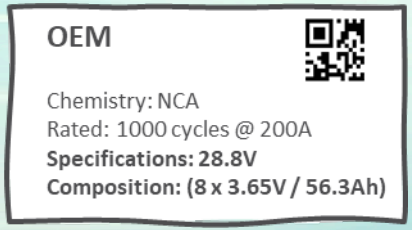
CARB

Increasing Transparency



Standardized data on ZEVs

Increasing repair information access for independent shops

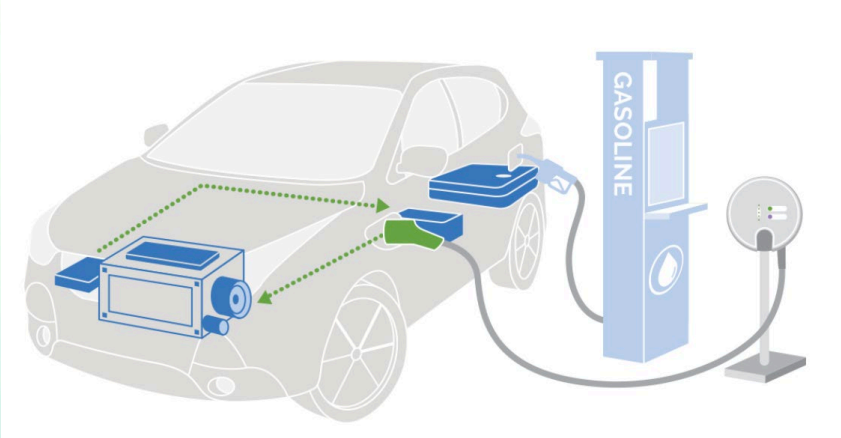


Streamlined battery labeling

CARB

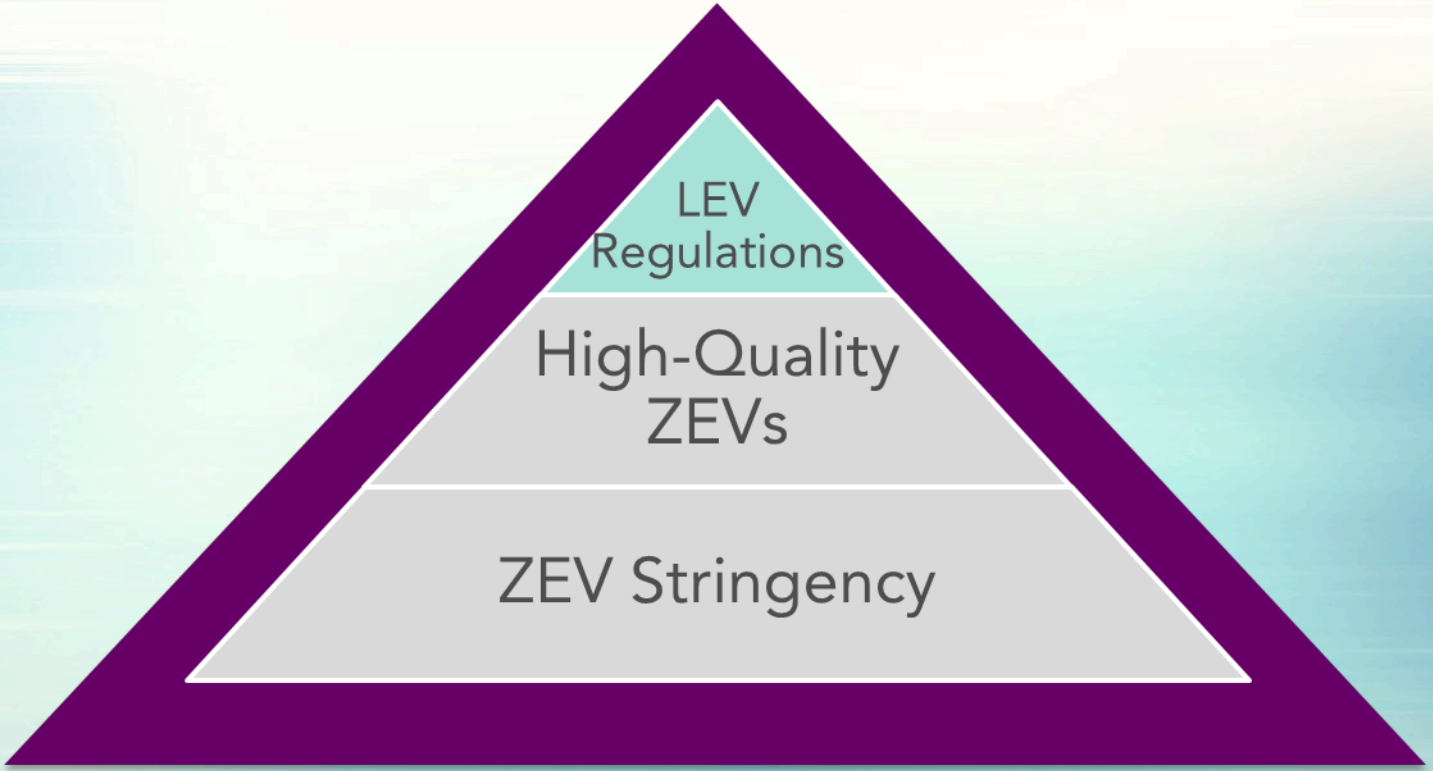
PHEVs as an Option

Minimum 50-mile electric range with greater zero emission driving

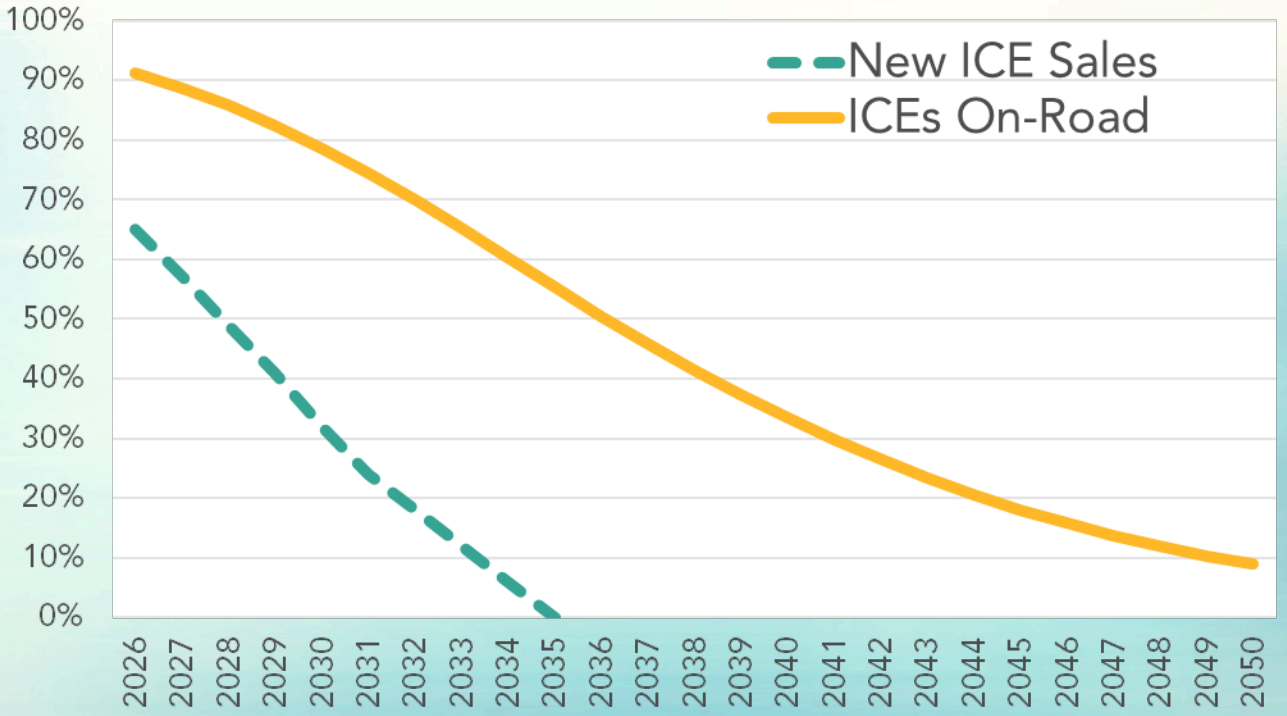


CARB

Continue emission reductions from combustion vehicles



ICE vehicles will comprise a significant portion of the fleet even beyond 2035



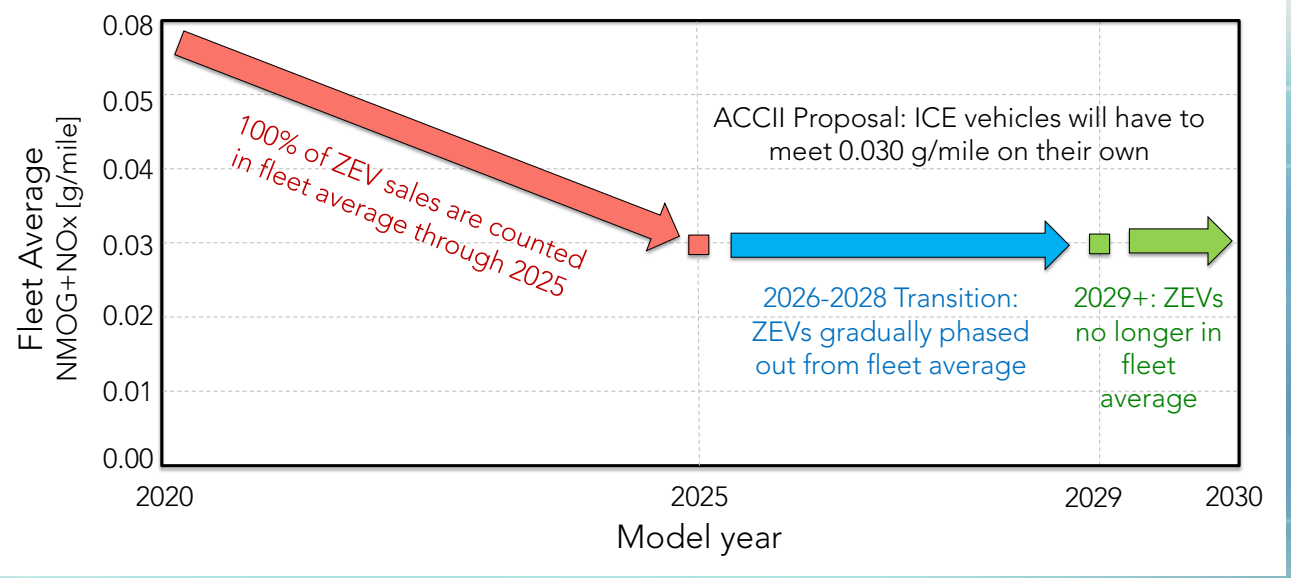
CARB

ACC II Regulations keep combustion engine vehicles on the right path

- Changes to fleet average requirements
- New standards for aggressive driving and cold-starts
- More stringent evaporative standards
- Better emission control for medium-duty vehicles

Ensure combustion engine vehicles remain clean as fleet electrifies

- Phase out ZEVs from fleet average
- Remove dirtiest certification bins



Emission Standards for Aggressive Driving and Cold-Starts

Aggressive Driving Emissions

- NMOG+NOx aggressive driving standards equivalent to urban driving standards
- Reduce PM standard from 6 to 3 mg/mile

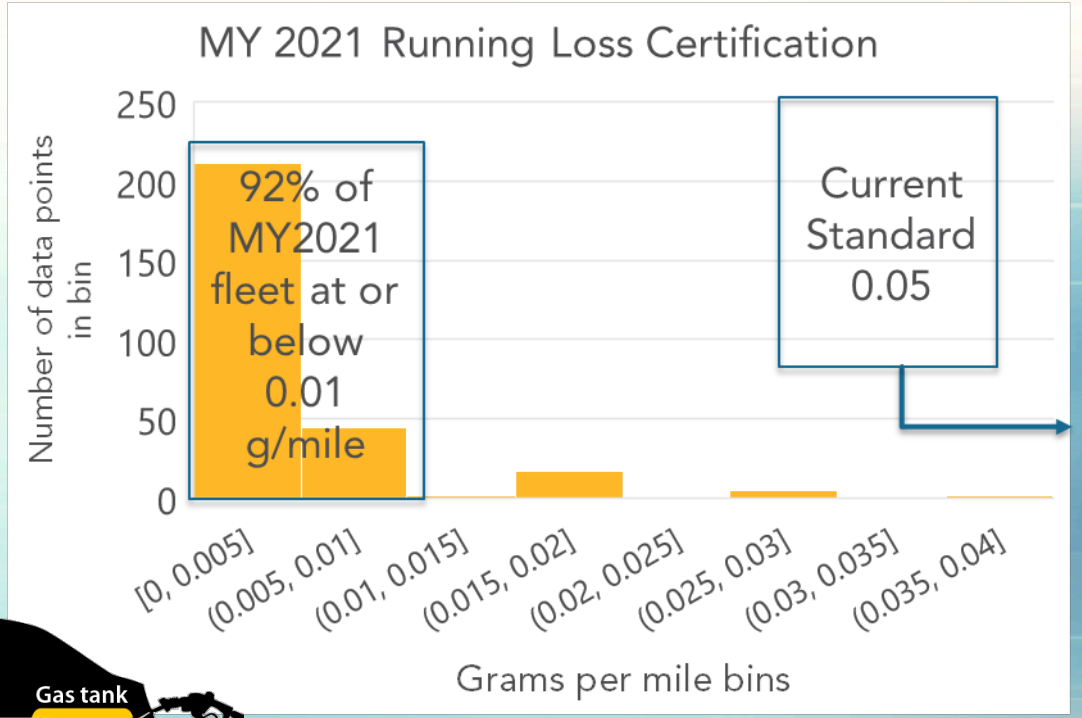
New Cold-Start Emission Standards

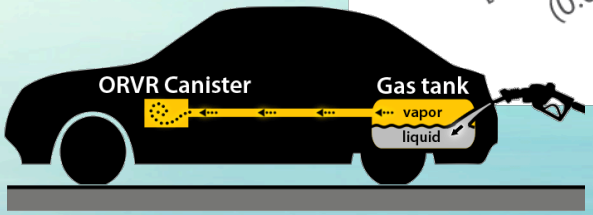
- Partial soak standards to control emission impacts of cool-downs
- Early drive-away standards
- High-power cold-start emission standards for PHEVs

CARB

More stringent evaporative emissions standards

1. Reduce running loss standard from 0.05 to 0.01 g/mile to eliminate dirtiest vehicles
2. Design requirements to minimize puff emissions during refueling





CARB

Better Emission Control for Medium-Duty Vehicles

Reduce fleet average for NMOG+NOx

- More stringent fleet average standards for Class 2b and Class 3 medium-duty vehicles
- Remove ZEVs from the fleet average
- Remove higher bins and add lower FTP emission bins

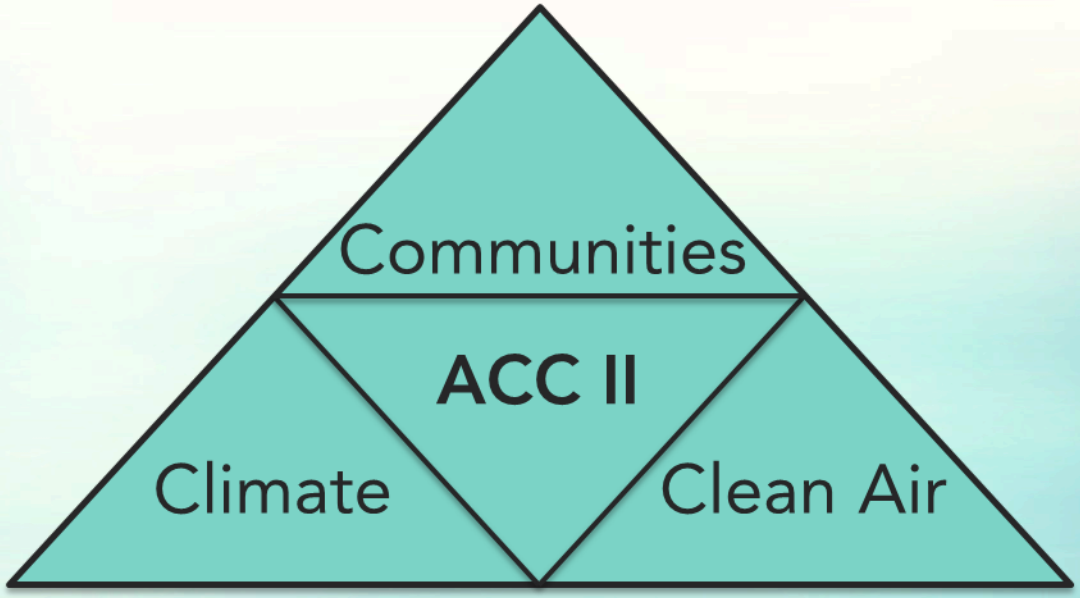
Aggressive driving standards

- New stand-alone standards for NMOG+NOx
- Tighten PM emission standards

Control emissions during towing

- New standards during towing operation
- Equivalent to standards adopted by heavy-duty vehicle regulations
- Applicable to towing vehicles with tow capacity of 14,000 lb. or more GCWR

ACC II Benefits and Impacts



Total Costs and Savings from ACCII

Direct costs (2026-40)

- $212.6 billion, including $40.7 from vehicle and charger purchases

Direct savings (2026-40)

- $294.5 billion

Net Impact: $81.8 billion (savings)

Does not include health benefits or social cost of carbon

BEV owners save substantial money: 300-mile BEV passenger car example

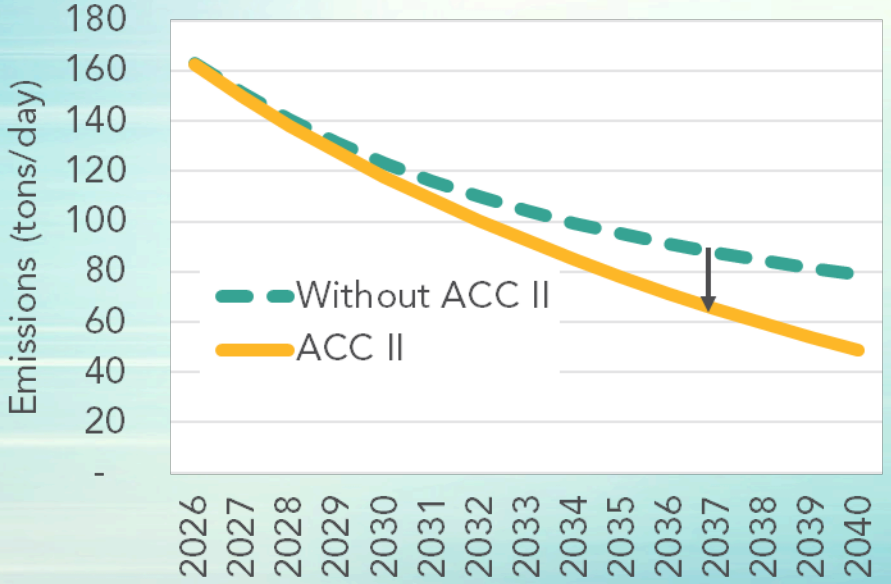
CY	Avg Incremental Retail Price vs. ICEV	Total Cost of Ownership over 10 Years	
		Without Home Charging	With Home Charging
2026	$ 3,102	$ 3,216 savings	$ 4,267 savings
2035	- $ 538	$ 7,659 savings	$ 8,835 savings

Consumer sees savings within first year for 2026 when accounting for incremental price spread out in a five-year vehicle loan

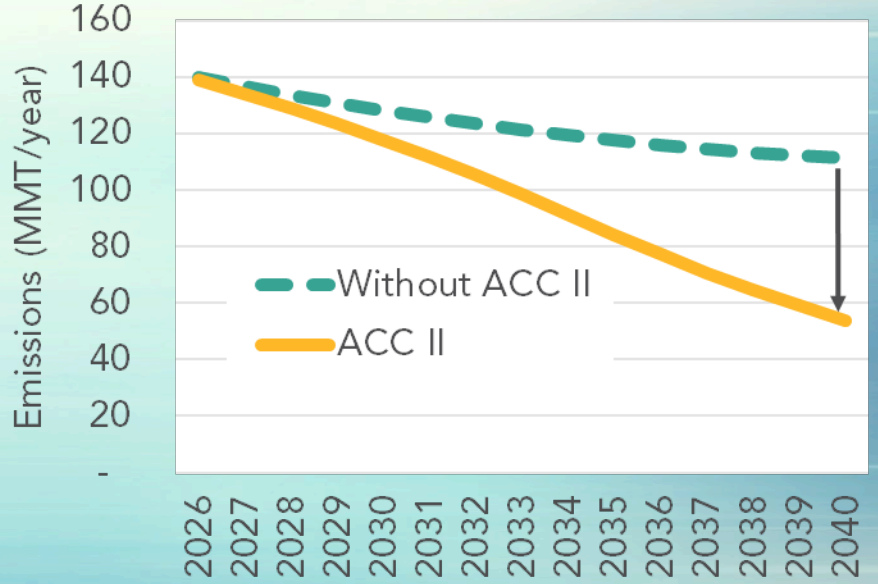
CARB

ACC II provides substantial statewide emission reductions

NOx emissions fall 26% in 2037

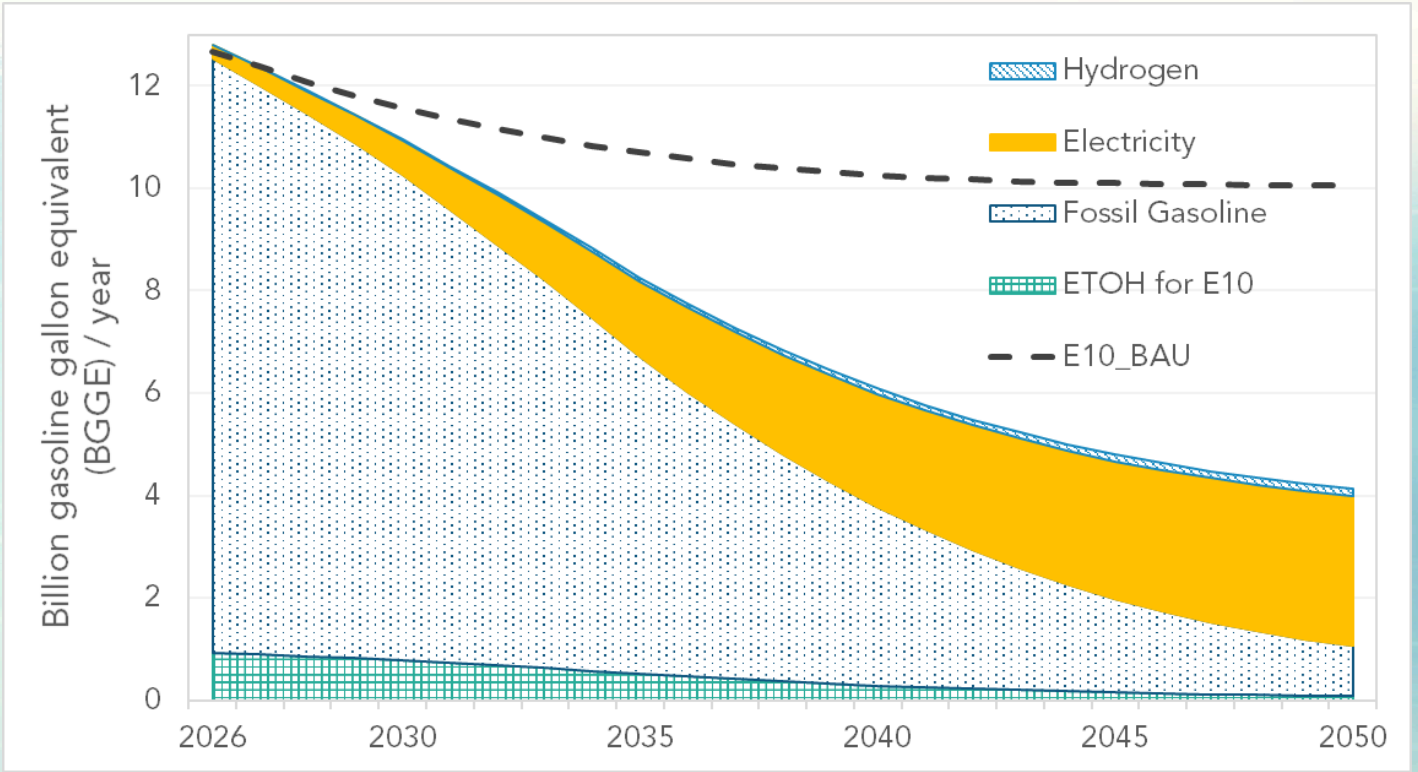


GHG emissions fall 50% in 2040



CARB

ACC II provides substantial statewide reduction of fossil fuel consumption



CARB

Continuing to Refine the Proposal

- Update to ZEV assurance measures (durability, in-use, data, and warranty)
- Revisit historical ZEV credits
- Add incentive for FCEVs through 2030
- Update treatment of MDV ZEVs
- General regulatory clean-up based on comments

CEQA Environmental Analysis

- Draft Environmental Analysis (EA) completed and released for 45-day public comment period
  - April 15, 2022 – May 31, 2022
- Next Steps
  - Prepare written responses to comments on Draft EA
  - Present Final Environmental Analysis and written responses to comments on Draft EA to the Board

Next Steps and Resolution

- Adopt resolution directing staff to return with final proposed Advanced Clean Cars II regulations for adoption
- Next Steps
  - Proposed modifications released for 15-day public comment in June 2022
  - Second hearing anticipated in August 2022